[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0830; Project Identifier AD-2020-00257-R; Amendment 39-21836; AD 2021-24-15]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Canada Limited Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for Bell Textron Canada Limited Model 206L-1, 206L-3, and 206L-4 helicopters with certain Air Comm Corporation air conditioning systems installed. This AD was prompted by reports of damage to the drive ring spline teeth and the mating spline teeth. This AD requires visually inspecting the drive ring spline teeth and the mating area spline teeth on the oil cooler blower shaft for signs of deformation and fretting and depending on the results of the inspection, removing certain parts from service. This AD also requires reinstalling certain parts, applying torque, and aligning certain bolt holes. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Air Comm Corporation, 1575 Westminster, CO 80234; telephone (303) 440-4075; or at https://www.aircommcorp.com. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at https://www.regulations.gov by

searching for and locating Docket No. FAA-2021-0830.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0830; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any referenced service information, any comments received, and other information. The street address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Matthew Bryant, Aerospace Engineer, Denver ACO Branch, FAA, 26805 East 68th Avenue, Denver, Co 80249; telephone (303) 342-1080; email 9-Denver-Aircraft-Cert@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Bell Textron Canada Limited Model 206L-1, Model 206L-3, and Model 206L-4 helicopters with certain Air Comm Corporation air conditioning systems installed. The NPRM published in the *Federal Register* on September 24, 2021 (86 FR 53015). In the NPRM, the FAA proposed to require within 300 hours time-in-service (TIS), and thereafter at intervals not to exceed 300 hours TIS, gaining access to the drive ring spline teeth and the mating area spline teeth on the oil cooler blower shaft, repetitively inspecting the drive ring spline teeth and the mating spline teeth on the tail rotor drive's oil cooler blower shaft for deformation and fretting, and depending on the results of each inspection, removing certain parts from service before further flight. The NPRM also proposed to require reinstalling certain parts, and if required, reinstalling the drive pulley by torqueing and aligning the drive pulley bolt holes.

The FAA issued Special Airworthiness Information Bulletin SW-19-05 on April 4, 2019 (SAIB SW-19-05), to alert owners and operators of Bell Textron Canada Limited Model 206L-1, 206L-3, and 206L-4 helicopters with Air Comm Corporation's

Supplemental Type Certificate (STC) SH2750NM installed. SAIB SW-19-05 was prompted by reports of the air conditioner pulley's locking system, which is installed on the oil cooler drive shaft's splined quill, causing excessive spline tooth wear to the drive ring spline teeth and the mating spline teeth on the oil cooler blower shaft. SAIB SW-19-05 recommends following the inspection instructions of certain Air Comm Corporation service information and routinely inspecting the air conditioner pulley lock ring.

At the time SAIB SW-19-05 was issued, the airworthiness concern was not determined to be an unsafe condition that would warrant AD action under 14 CFR part 39. However, subsequent investigations were not able to determine whether the limited damaged observed on several oil cooler blower shafts would remain localized or progress to a point where the shaft is no longer safe for continued use. The FAA also later determined that operators may have difficulty aligning the air conditioning system's drive ring holes with the air conditioning condenser drive pulley without leaving the condenser drive pulley under-torqued. This condition, if not addressed, could result in a failure of the oil cooler blower shaft, which could lead to loss of tail rotor authority and subsequent loss of helicopter control.

Accordingly, the FAA is issuing this AD for Bell Textron Canada Limited Model 206L-1 and 206L-3 helicopters with Bell Model 206L1/L3 Service Instruction for Increased Gross Weight Upgrade Kit BHT-206-SI-2052, Revision 1, dated October 14, 2010, installed and Bell Model 206L-4 helicopters equipped with one of the following Air Comm Corporation STC SH2750NM air conditioning systems part number; 206EC-204-1, 206EC-204-2, 206EC-208-1, 206EC-208-2, 206EC-210-1, 206EC-210-2, 206EC-210-3, 206EC-212-3 or 206EC-212-4. Helicopters with a 206L-1+ designation are Model 206L-1 helicopters and helicopters with a 206L-3+ designation are Model 206L-3 helicopters.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed except for minor editorial changes. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters.

Related Service Information Under 1 CFR Part 51

The FAA reviewed ACC Air Comm Corporation Service Bulletin SB 206EC-091119, Rev B, dated May 26, 2021 (SB 206EC-091119 Rev B), which specifies procedures for visually inspecting the drive ring spline teeth and the mating spline teeth on the tail rotor drive's oil cooler blower shaft for deformation or fretting.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Differences Between this AD and the Service Bulletin

SB 206EC-091119 Rev B requires inspecting the air conditioning compressor drive belt tension and the general condition of the drive belt, drive pulley, and surrounding components, whereas this AD does not. SB 206EC-091119 Rev B requires reporting any deformation or fretting to Air Comm Corporation Service Department, whereas this AD does not. SB 206EC-091119 Rev B provides an option to deactivate the air conditioning system if deformation or fretting is found on the drive ring or the oil cooler blower shaft assembly, whereas this AD requires removing these parts from service instead.

Costs of Compliance

The FAA estimates that this AD affects up to 100 helicopters of U.S. Registry. Labor rates are estimated at $85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Removing the tail rotor drive system's forward short shaft, spline adaptor, and drive ring and visually inspecting the drive ring spline teeth and the mating area spline teeth take about 1 work-hour for an estimated cost of $85 per helicopter and $8,500 for the U.S. fleet per inspection cycle.

Replacing the drive ring takes about 3 work-hours and parts cost about $300 for an estimated cost of $555 per replacement.

Replacing the oil cooler blower assembly takes about 3 work-hours and parts cost about $2,720 for an estimated cost of $2,975 per replacement.

Aligning each bolt hole and re-torqueing the drive pulley take about 0.5 work-hours for an estimated cost of $43 per helicopter.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-24-15 Bell Textron Canada Limited: Amendment 39-21836; Docket No. FAA-2021-0830; Project Identifier AD-2020-00257-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to the Bell Textron Canada Limited helicopters identified in paragraphs (c)(1) and (2) of this AD:

(1) Model 206L-1 and Model 206L-3 helicopters, certificated in any category, with Bell Model 206L1/L3 Service Instruction for Increased Gross Weight Upgrade Kit BHT-206-SI-2052, Revision 1, dated October 14, 2010, installed and that are equipped with one of the following Air Comm Corporation Supplemental Type Certificate (STC) SH2750NM air conditioning systems part number (P/N) 206EC-204-1, 206EC-204-2, 206EC-208-1, 206EC-208-2, 206EC-210-1, 206EC-210-2, 206EC-210-3, 206EC-212-3, or 206EC-212-4; and

Note 1 to paragraph (c)(1) of this AD: Helicopters with a 206L-1+ designation are Model 206L-1 helicopters and helicopters with a 206L-3+ designation are Model 206L-3 helicopters.

(2) Model 206 L-4 helicopters, certificated in any category, and that are equipped with one of the following Air Comm Corporation STC SH2750NM air conditioning

systems P/N 206EC-204-1, 206EC-204-2, 206EC-208-1, 206EC-208-2, 206EC-210-1, 206EC-210-2, 206EC-210-3, 206EC-212-3, or 206EC-212-4.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6510, Tail Rotor Drive Shaft.

(e) Unsafe Condition

This AD was prompted by reports of deformation or fretting of the spline teeth on the air conditioning system drive ring and on the oil cooler blower shaft. The FAA is issuing this AD to detect deformation and fretting. The unsafe condition, if not addressed, could result in a failure of the oil cooler blower shaft, which could lead to loss of tail rotor authority and subsequent loss of helicopter control.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Within 300 hours time-in-service (TIS) after the effective date of this AD, and thereafter at intervals not to exceed 300 hours TIS:

(1) Gain access to the drive ring spline teeth and the mating area spline teeth on the oil cooler blower shaft by removing the tail rotor drive system's forward short shaft and spline adaptor, and the air conditioner system's drive ring. Refer to Figure 1 of ACC Air Comm Corporation Service Bulletin SB 206EC-091119, Rev B, dated May 26, 2021 for a depiction of each component's location.

(2) Visually inspect the drive ring spline teeth and the mating area spline teeth on the oil cooler blower shaft for deformation and fretting.

(i) If there is deformation or fretting on the drive ring spline teeth, before further flight, remove the drive ring from service and replace it with an airworthy part.

(ii) If there is deformation or fretting on the mating area spline teeth of the oil cooler blower shaft, before further flight, remove the oil cooler blower assembly from service and replace with an airworthy part.

(3) Reinstall the drive ring, spline adapter, and the forward short shaft. If the compressor drive pulley was removed, torque the drive pulley to 200-300 in-lbs, increasing torque in this range to align the four threaded holes with the through holes in

the drive ring. Do not back-off torque to align the bolt holes.

(h) Special Flight Permits

Special flight permits are prohibited.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Denver ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the Denver ACO, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-Denver-Aircraft-Cert@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Matthew Bryant, Aerospace Engineer, Denver ACO Branch, FAA, 26805 East 68th Avenue, Denver, CO 80249; telephone (303) 342-1092; email 9-Denver-Aircraft-Cert@faa.gov.

(2) Service information identified in this AD, is available at the contact information specified in paragraphs (k)(3) and (4) of this AD.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) ACC Air Comm Corporation Service Bulletin SB 206EC-091119, Rev B, dated May 26, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Air Comm Corporation, 1575 W 124th Ave #210, Westminster, CO 80234; telephone: (303) 440-4075; email service@aircommcorp.com.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on November 19, 2021.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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